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## NÆVUS.

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*presented by the author*











DR. DYER'S CASE OF NÆVUS UNIUS LATERIS.

# NÆVUS.\*

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Strictly defined, a nævus is a congenital alteration of the skin, in which there is a localized increase in the amount of pigment deposit. There may be, concomitantly, hypertrophy of other elements of the skin, as the vascular and the connective tissues, the nerves or even the lymphatics.

In its limited definition, nævus pigmentosus is the term applied to the existing lesion, which consists in a simply exaggerated pigment supply, appearing as the ordinary mole. These are generally quite small, in color brown or black, and are found in all locations, but with a predilection for the face, neck and back. When simple, smooth and soft, this form is known as "nævus spilus." Where the hypertrophy extends to the papillary part of the corium, and the mole is warty and rough in appearance, the name of "nævus verrucosus" is applied. When there is additionally an excess of fat cells and the growth is large and dependant, the variety is styled "nævus lipomatodes." On any of these there may be a hypertrichiasis, or overgrowth of hair, forming the hairy mole, or "nævus pilosus."

While correctly only congenital, nævi of these types may

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develop *de novo* after birth. Either congenital or acquired, however, they may grow from the start and develop considerably. They may grow from time to time, with intermissions of inactivity, years even being required in the final development.

The presence of *nævi* is in most instances of small pathologic significance. The hairy moles and those of the warty or papillary character are objectionable for cosmetic reasons, and demand treatment. These, of course, are particularly undesirable on the face.

Melanotic cancer may be ushered in by a *nævus*, but this is uncommon enough to warrant only passing mention.

Among the *angiomata*, classed in dermatology with the neoplasms, there is one variety separated as the vascular *nævus*. To this variety the names of *nævus vascularis*, *nævus sanguineus*, or birth-mark, are applied. This form of birth-mark must be included with the *nævi*, and in reality it is properly that particular kind of *nævus* to which the term "mother's mark" is given. Vascular *nævi* may be present at birth, or may only develop several weeks or months after birth.

The term *angioma* is applied to tumors of embryologic rudimentary vessels which develop into blood vessels.

The vascular *nævus* may involve the capillaries, the smaller venous or arterial terminal branches.

The capillary *nævus* is distinctly cutaneous, and in size is as small as a pin's head, or varies to the size of the palm, or even larger, involving large areas of the body.

This is the form of vascular *nævus* most commonly met with. It is usually only slightly elevated, or level with the surface of the skin. It is often seen as a tiny red spot with radiating lines made by the capillaries, the "*nævus araneus*." The more diffuse variety, assuming irregular shapes, often startling in their resemblance to familiar objects, is known as the "port wine" mark or "strawberry" mark. These occur in many instances as family marks, appearing in several successive generations. The entire side of the face may be involved. I have seen one case in which the entire lower lip and chin were involved. Vascular *nævi* often begin indistinctly and spread gradually to cover large surfaces. On the other hand *nævi*, present at birth, may within a few months entirely disappear spontaneously.

The venous nœvus is apt to be more elevated than the capillary. It is smooth, with protuberant surface, often lobulated, soft and compressible. Here, thin walled veins and small arteries are connected directly by small sinuses, without the intermediary capillaries, all bound together with delicate connective tissue. Pulsation is not infrequently present, and many of the venous nœvi are erectile. In size, the venous nœvi vary from the size of a large pea to a hazelnut, or even an orange. This kind of nœvus may ulcerate shortly after birth, and undergo a spontaneous cure. Last year a child was brought to me in the midst of this process. The growth was located over the right loin, in size about an inch and a half in diameter, but fully half an inch in depth. It was ulcerating freely, and came away in sloughs. In two weeks' time there was only a smooth, red scar about half an inch in diameter to mark the site of the growth. The child was 23 months old, had the nœvus since birth, but it began ulcerating only one week before it was brought to me. In this same child there was a small venous nœvus in the line of the eyebrow, just over the internal angle of the right eye. In size, it was as large as a small hazelnut. The mother was naturally distressed at the location. With the history of the other lesion, however, I advised non-interference, and had the gratification of seeing the gradual disappearance of the growth, which finally could scarcely be noticed one year later.

Another variety of nœvus has been separated in which the distribution of the lesions along the course of one or more of the superficial nerve branches has led to the opinion that there is some nerve influence at fault as the etiologic factor.

To the lesions occurring in this way the term *nœvus unius lateris*, or *nœvus neuroticus* is applied. Some attempts have been made to show the association of *nœvus unius lateris* with previous neurotic influence, as injury at or near the site of the lesions, shock, etc. It is certain, however, that there is a distinct difference in the arrangement of the lesions of the variety under discussion and ordinary nœvi. In the case whose photograph I show you there is a distinct arrangement in herpetiform groups, as if a spray of pigment had been thrown on the one side of the face, in groups arranged along the course of the



submaxillary branch of the trifacial nerve. The distribution to the right half of the face, the sharply defined termination of the groups at the mental line, and the tendency of the patient to the formation of pigment lesions, evidenced by the extensive freckling, all argue for a reflex factor.

The lesion is like the ordinary *nævus pigmentosus*, and presents two varieties, the flat mole, deep brown or black in color, and the verrucose or warty mole.

The necessity for treatment of *nævi* must depend much upon the character, the location, the size and importance of the lesion. Simple pigmentary moles are of little serious importance, and for pathologic reasons need not be removed. When, however, the presence of one or more of these produces discomfort, or disfigurement, the removal is desirable. Hairy moles are often unsightly, and, occurring on the nose, or prominently on the face, are objects of mortification, if not concern, to the individual so afflicted.

With vascular growths, however, it is quite different; the disfigurement only adds to the possibility of the further development, and the danger of accidental hæmorrhage, from the casual breaking or spontaneous rupture of the tumor, demands attention.

In any instance, then, whether from cosmetic or pathologic indications, there are methods of treatment of *nævi* which are employed. The first observation is that to cure the lesion removal is necessary. The removal of pigmentary *nævi* should be attended with as little inconvenience or pain as is possible. The pigment is usually found in the rete Malpighii, but may exist as deeply as in the corium. Agents employed must be directed accordingly. Acids, nitric or carbolic, may be used. Bichloride of mercury in collodion, grs. v-x to the oz.ss., pyrozone and sodium ethylate, act similarly by actually destroying the outer layers of the skin. Where the growth is large and permits, excision is advisable. With the papillary moles, or the warty moles, the curette, followed by the actual cautery, the Pacquelin, or the galvano-cautery, is the best treatment. Ordinarily, however, electrolysis serves the purpose. To the negative pole of a galvanic battery a small steel needle is attached, either in a needle holder or with an insulated wire. I



use for this purpose a fine jeweler's broach. The positive pole carries the sponge, which is customarily held in the patient's hand. The needle is introduced beneath the pigmented mole and the current is gradually increased until the lesion blisters. It requires about 8 or 10 milliamperes, or, if cells with switch-board are used, about 12 to 20 cells. Where the moles are hairy, a blunted broach or needle is desirable. The hairs are removed first by electrolysis, and then the mole. The needle here should be gently introduced into the hair follicle, care being used not to pierce the follicle, the hair shaft serving as a guise. The current is gradually applied until there is frothing at the orifice of the follicle, when the hair is ready to come away. If there is resistance on the part of the hair, the operation is not complete. Not more than 3 to 5 milliamperes are needed in this operation, one serving oftentimes. The negative pole, of course, must be used here.

In the treatment of vascular nævi, electrolysis is likewise of service, but more particularly in superficial capillary varieties, when these are limited in area. The treatment of the vascular nævus is aimed at the absorption and atrophy of the blood vessels or at the destruction of them. Astringent applications, causing contraction, as the liquid plumbi subacetatis, may serve in the insignificant, superficial varieties. It is applied saturated on cloths. Collodion, alone or with ergot or tannin, and traumaticin are used to produce contraction. Mechanical compression may serve, especially over the bony parts. A piece of wood or metal is firmly bound over the nævus, or held in place with adhesive plaster. Puncturing or slitting small telangiectic nævi often suffices. This is done either with a scalpel or with an ordinary needle. In large patches, linear scarification is done with a fine and sharp scalpel, or with a scarifier. Multiple puncture with several needles in a cork or a piece of wood is employed at times. The indications, however, are met in most cases by the agent which will produce a plugging of the vessels, by setting up an inflammation; by caustics or the actual cautery, destroying the lesion; finally, by actual removal with the knife, the ligature, or by other method. Where it is thought advisable to resort to a complete removal by operative methods, care should be taken to ascertain the ex-

istence or absence of the hæmorrhagic tendency in the patient. Where there are no such contra-indications, the knife is permissible. A free incision should be made, to allow for even union, and deep stitches must be taken, after all the larger vessels have been tied. It is often well to use the cautery for the smaller and intangible vessels. There are two methods for using the ligature. First of all, it is a good plan in smaller nævi to circumscribe the growth with a single or double silk ligature, drawing tightly and tying on opposite side of the growth, when the double ligature is used. If larger nævi, the ligation is applied at a point a little remote from the growth. An incision is made above the vein, or small artery, and a cat-gut ligature is applied, the wound closed. In either instance the growth begins to pale after several days. In superficial nævi the whole patch grows bluish in color. Here and there a spot grows white where the area has been absorbed, and finally, in the successful cases, the whole patch likewise grows whiter and whiter. Often it is advisable to ligate a few days or weeks before the excision, especially in the deep-seated lesions. When the cautery is employed several methods may be followed. A fine platinum needle may be attached to the galvano-cautery, raised to a red heat, and several introductions made. Multiple punctures more or less deep can be likewise made with the same instrument. Linear cauterization may as well be employed with the needle or small platinum knife. The Pacque-lin cautery will serve the same purpose.

Caustics act as the cautery does, by producing an eschar, and finally a slough. With caustics, however, the slough is apt to be more extensive than with the cautery. When this method is decided upon, care must be exercised with the agent used.

Freshly prepared ethylate of sodium, pyrozone, chloride of zinc in solution, nitric acid, the acid nitrate of mercury are among the caustics employed. All of these act in much the same way, producing actual destruction, followed by crusting, and a more or less superficial scar, which gradually fades.

Vaccination serves in locations where an irregular scar is no objection. The slight bleeding need not be stopped, except by a temporary compress. The injection of pure carbolic acid or the tincture of iodine is followed quite often by gratifying



results. Little scarring remains, plugging of the vessels is rapidly obtained, and the operation is less painful and of shorter duration than with other methods. The injection of a 1 per cent. solution of chloride of zinc is used for the same purpose. The perchloride of iron may be used by injection, or, as is frequently indicated in the more elevated growths, silk threads, saturated with the perchloride solution, are passed in several directions through the nævus.

Except in small nævi, the treatment is never highly satisfactory, and the methods employed may have to be changed several times before the whole of the growth is removed. It is always well to impress upon the patient the necessity of perseverance in the matter. Dr. Geo. H. Fox reported the successful removal of an extensive nævus of the face by electrolysis, but it required nearly two years to accomplish this (*Four. of Cut. and Gen. Urin. Dis.*, May, 1894).

It requires a goodly amount of moral and physical courage on the part of the patient to submit to the pain of the operation, which is repeated at each sitting, when electrolysis is used. This method, however, promises most from the cosmetic standpoint, as it leaves but little evidence of the procedure. Most times, too, the treatment is demanded for purely cosmetic reasons. The diagnosis of nævus presents no difficulties, and the prognosis is always a favorable one, except where the possibility of a degeneration and a slough may endanger life on account of a proximate blood vessel of importance.

Notwithstanding the multitude of methods in vogue, the treatment of nævus is still far from satisfactory, and the field is yet large enough to admit of acceptable suggestions.







